## REMARKS

Claims 1, 3-6 and 9-14 are currently pending in the application. By this amendment claim 1 is amended and claims 4, 11, 13 and 14 are amended in accordance with the Examiner's instructions. The foregoing separate sheets marked as "Listing of Claims" shows all the claims in the application, with an indication of the current status of each.

The Examiner's indication that claims 5, 10-11 and 13-14 contain allowable subject matter is acknowledged with appreciation. The Examiner's objections to certain informalities in claims 4, 11, 13 and 14 are overcome by the present amendment.

The Examiner has rejected claims 1, 3, 4, 6 and 9 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 2,403,731 to MacNeille. MacNeille is 1946 patent describing a beam splitter in which reflected and transmitted rays are polarized at right angles to each other and in which the polarization is substantially complete (col. 1, lines 3-6). The beam splitter includes a multilayer material whose thicknesses are such as to control the ratio of reflected to transmitted light (col. 1, lines 12-13) and its orientation with respect to incident light is such that the light strikes the interfaces of the layers at approximately Brewster's angle in order to control the polarization of the beams (col. 1, lines 13-17). Combining these teachings, MacNeille further discloses a beam splitter where 50% of the incident light is reflected (col. 1, lines 25-26) using layers with alternating high and low indexes of a quarter wavelength thickness (col. 1, lines 27-33). The MacNeille invention is workable for light beams having rays whose angle of incidence varies as much as 5 degrees from the desired axis (col. 1, lines 47-50) and where the wavelength varies from one-half to one and a half the desired value for which layer thicknesses are exactly correct (col. 1, lines 52-55).

MacNeille discloses the state of the prior art as is also described in the background section of the present invention (page 1, line 7, to page 3, line 13). It was already well known to provide a polarization beam splitter (page 1, line 19) having layers of alternating high-refractive index and low-refractive index materials (page 1, line 20, to page 2, line 1) on a flat transparent substrate (page 2, line 2) where the Brewster condition is satisfied (page 2, lines 4-6) for light reflected or transmitted (page 2, lines 7-8) for light within a narrow wavelength range (col. 2, lines 9-10), thereby achieving an excellent degree of polarization in each of reflected light and transmitted light (page 2, lines 10-11). Thus the disclosures of MacNeille are admitted prior art for the present invention.

However, following a description of a prior art as disclosed in MacNeille, the present invention points out that while the prior art polarization beam splitter separates incident light perfectly into an s-polarized light component and a p-polarized light component (page 2, line 15-17), this is unsuitable for the problem being addressed by the present invention, namely: compensating for light having unequal intensity ratios for s-polarized and p-polarized components (page 1, lines 12-14) as happens with incident light propagated through an optical fiber (page 1, lines 8-10). It should be noted that light propagation using optical fibers is a technology more recent than the 1946 MacNeille patent. The compensation mechanism is to obtain a desired intensity ratio of the s-polarized light component to the p-polarized light component (page 1, lines 15-17), which is precisely the deficiency of polarization beam splitters (page 2, lines 18-21) such as MacNeille.

In addition to the prior art disclosed in MacNeille, the present invention observes a further line of prior art wherein the transmittance ratio of the s-polarized light component to the p-polarized light component can be varied by the angle of incidence on a transparent flat plate (page 2, lines 22-25). This prior art mechanism is more suitable for the desired light intensity compensation purpose than the polarization beam splitter (page 3, lines 1-2), however, in order to achieve a high

degree of polarization it was necessary to have a large angle of incidence (page 3, lines 3-7), which in turn increased the size of a housing for the device (page 3, lines 7-9) and reduced the intensity of the resultant light (page 3, lines 12-13) because of the low transmittance at the large angle of incidence (page 3, lines 9-12). Figures 8 and 9 of the present invention show the transmittance ratios for the glass plate mechanism of the prior art, and it is seen from those figures that the desired control of the ratio requires a high angle of incidence. A significant portion of the control range occurs at an angle of incidence above 70 degrees. This is in contrast to what is shown for implementations of the present invention in Figures 2-7, where it is seen that the control range occurs for an angle of incidence between 20 and 70 degrees.

The configuration of the invention, as described in claim 1, overcomes the limitations of the two threads of prior art described above by combining a polarizing filter structure with a controllable transmittance ratio.

It should be noted that MacNeille does not disclose a mechanism for control of the transmittance ratio (or, in parallel fashion, the reflectance ratio) of the s-polarized component to the p-polarized component (as defined at page 2, lines 22-24). Instead, MacNeille merely observes the well known dependence of the ratio of the reflected to transmitted light (col. 1, line 12) upon the thicknesses of the layers (col. 1, lines 11-12), using that principle to obtain a 50% reflection (col. 1, lines 25-26) and an even split of the incident light into polarized components. Consequently, the Examiner's assertion that MacNeille discloses a transmittance ratio, much less a transmittance ratio that falls within a certain range, is simply mistaken. In particular, nowhere in the passage cited by the Examiner (col. 1, lines 3-39) is there any description or suggestion of a transmittance ratio (or reflectance ratio) of the s-polarized light component to the p-polarized light component. Claim 1 has been amended to emphasize the above described function of the invention with respect to controlling the transmittance ratio.

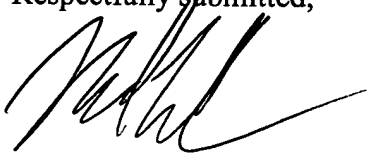
Consequently, it is believed that MacNeille is overcome as a §102 reference as to claims 1, 3, 4, 6 and 9.

In view of the foregoing, it is requested that the application be reconsidered, that claims 1, 3-6 and 9-14 be allowed, and that the application be passed to issue.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at 703-787-9400 (fax: 703-787-7557; email: clyde@wcc-ip.com) to discuss any other changes deemed necessary in a telephonic or personal interview.

If an extension of time is required for this response to be considered as being timely filed, a conditional petition is hereby made for such extension of time. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041.

Respectfully submitted,



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